

## **Gabriella Castoria, MD PhD**

### **PRESENT POSITION:**

Full Professor of General Pathology - University of Campania 'L. Vanvitelli'

### **WORK ADDRESS:**

Department of Precision Medicine, School of Medicine- University of Campania 'L. Vanvitelli',  
via L. De Crecchio 7,  
80138 Naples

[gabriella.castoria@unicampania.it](mailto:gabriella.castoria@unicampania.it)

Phone: +39 081 5667559

Fax: +39 081 5667555

### **ACADEMIC APPOINTMENTS:**

1994-2006 Assistant Professor of General Pathology, Faculty of Medicine, II University of Naples.

2006-2012: Associate Professor of General Pathology, Faculty of Medicine, II University of Naples.

2012 to date: Full Professor of General Pathology- School of Medicine, University of Campania 'L. Vanvitelli'.

### **RESEARCH INTERESTS:**

**Steroid hormone action in human diseases.**

**Invited presentations in National and International Meetings** of Endocrinology, Oncology and Molecular Biology. In July 1996, she was awarded at "Gordon Research Conference on Hormone Action" – (Meriden- New Hampshire- U.S.A)- Poster entitled 'Signal transduction pathway activation by estradiol in human carcinoma-derived cell lines'.

**Editorial activity: Reviewer** for Mol. Cell. Biol., Mol Biol Cell, Mol. Oncology, Journal of Molecular Endocrinology, Molecular and Cellular Endocrinology, Intern. J. of Cancer, Circulation, Plos One, Oncogene, Endocrinology, Cancer Res., Oncotarget and other journals.

**-Associate Member of Faculty 1000 Biology (Section of Signal Transduction and Cell Biology).**

**-Associate Editor of Frontiers in Cancer Endocrinology.**

**- Associate Editor of International Journal of Molecular Sciences**

**-Editor** of the book 'Advances in rapid sex-steroid action: new challenges and new chances in breast and prostate cancers' (Springer, 2012).

**-Editor** of the book 'Steroid Receptors- Methods and Protocols' (Humana Press- Springer; 2014).

**-Managing Editor** of *Frontiers in Bioscience (Nuclear and Growth Factor Receptors as Targets in Human Diseases)* and *Frontiers in Cancer Endocrinology- Special Issue: 'The androgen receptor in breast cancer'*.

**REVIEWER FOR:**

**-Italian Ministry of University and Scientific Research (P.R.I.N., F.I.R.B. and S.I.R. projects).**

**-A.N.V.U.R.** (Italian National Agency for University and Research Evaluation).

**-Deutsche Forschungsgemeinschaft (DFG)  
German Research Foundation**

**-Alzheimer's Association (U.S.A.)**

**SCIENTIFIC SOCIETIES**

**-Member of the Italian Society of Pathology and Translational Medicine (SIPMet).**

**-Member of the European Society for Translational Medicine (EUSTM).**

**SELECTED PAPERS**

High-Throughput Screening Identifies Kinase Inhibitors That Increase Dual Adeno-Associated Viral Vector Transduction In Vitro and in Mouse Retina. Maddalena A, et al. *Hum Gene Ther.* 2018 Aug;29(8):886-901. doi: 10.1089/hum.2017.220. Epub 2018 Jul 5.

Cross-talk between androgen receptor and nerve growth factor receptor in prostate cancer cells: implications for a new therapeutic approach. Di Donato M, et al. *Cell Death Discovery.* 2018 Jan 31;4:5. doi: 10.1038/s41420-017-0024-3. eCollection 2018

Extranuclear partners of androgen receptor: at the crossroads of proliferation, migration, and neuritogenesis. Castoria G et al. *FASEB J.* 2017 Apr;31(4):1289-1300. doi: 10.1096/fj.201601047R.

Cross-talk between androgen receptor/ filamin a and TrkA regulates neurite outgrowth in PC12 cells. Di Donato M et al, *Mol Biol Cell.*, mbc.E14-09-1352; 2015; doi:10.1091/mbc.E14-09-1352.

Phosphorylation of H3 serine 10 by IKK $\alpha$  governs cyclical production of ROS in estrogen-induced transcription and ensures DNA wholeness. B. Perillo et al. *Cell Death Differentiation*, 2014; doi:10.1038/cdd.2014.91.

Role of non-genomic androgen signalling in suppressing proliferation of fibroblasts and fibrosarcoma cells. Castoria G et al. *Cell Death Dis.* 2014 Dec 4;5:e1548. doi: 10.1038/cddis.2014.497

Tyrosine phosphorylation of estradiol receptor by Src regulates its hormone-dependent nuclear export and cell cycle progression in breast cancer cells. Castoria G, et al *Oncogene* 31, 4868-4877, 2012.

Androgen-induced cell migration: role of androgen receptor/filamin A association. Castoria G et al. *Plos One* 6 (2): e17218, 2011.

Role of cyclic AMP response element-binding protein in insulin-like growth factor-I receptor up-regulation by sex steroids in prostate cancer cells. M. Genua et al. *Cancer Res.* 69, 7270-7277, 2009.

Hormone-dependent nuclear export of estradiol receptor and DNA synthesis in breast cancer cells Lombardi M et al., *J. Cell Biol.* 182, 327-340, 2008.

Inhibition of estradiol receptor/Src association and cell growth by an estradiol receptor  $\alpha$  tyrosine-phosphorylated peptide. Varricchio L et al. *Mol Cancer Res.* 5, 1213-1221, 2007.

Inhibition of the SH3 domain-mediated binding of Src to the androgen receptor and its effect on tumor growth. Migliaccio et al., *Oncogene* 26, 6619-6629, 2007.

Steroid receptor regulation of epidermal growth factor signaling through Src in breast and prostate cancer cells: steroid antagonist action. Migliaccio A et al.. *Cancer Res.* 65, 10585-10593, 2005.

Role of atypical PKC in estradiol-triggered G1/S progression of MCF-7 cells. Castoria G et al., *Mol. Cell. Biol.* 24, 7643-7653, 2004.

Androgen-stimulated DNA synthesis and cytoskeletal changes in fibroblasts by a non-transcriptional receptor action. Castoria G et al., *J. Cell. Biol.* 161, 547-556, 2003.

PI3-K in concert with Src promotes the S-phase entry of oestradiol-stimulated MCF-7 cells. Castoria G et al. *EMBO J.* 20, 6050-6059, 2001.

Steroid-induced androgen receptor-oestradiol receptor beta-Src complex triggers prostate cancer cell proliferation. Migliaccio A. et al. *EMBO J.* 19, 5406-5417, 2000.

Non transcriptional action of oestradiol and progestin triggers DNA synthesis. Castoria G et al., *EMBO J.* 18, 2500-2510, 1999.

Activation of the Src/p21ras/Erk pathway by progesterone receptor via cross-talk with estrogen receptor. Migliaccio et al., *EMBO J.*, 17, 101-111, 1998.

Estradiol activation of human colon carcinoma-derived Caco-2 cell growth. M. Di Domenico et al., *Cancer Res.*, 56, 4516-4521, 1996.

Tyrosine kinase/p21<sup>ras</sup>/MAP-kinase pathway activation by estradiol-receptor complex in MCF-7 cells. Migliaccio, et al., *EMBO J.*, 15, 1292-1300, 1996.

A 67 KDa non hormone binding estradiol receptor is present in human mammary cancers. Castoria G et al., *Int. J. of Cancer*, 65, 574-583, 1996.

## PATENTS

**Patent No. 14728600.9: Modulators of the Src kinase activity for preventing or treating metastatic cancers. Cancer Res. Technology Ltd.**

## COLLABORATIONS

Laboratory of 'Cell Biology' – Dr. Ettore Appella - National Cancer Institute, National Institutes of Health, Bethesda, MD- U.S.A.; 'Centre de Regulació Genòmica (CRG), Dr. Miguel Beato- Universitat Pompeu Fabra, Barcelona (Spain); Laboratory of 'Cell Signalling'- Dr. Bart Vanhaesebroeck- UCL Cancer Institute, University College London, London (UK); Laboratory of 'Medical Genetics and Translational Medicine'- Dr. Alberto Auricchio- Telethon Institute of Genetics- Pozzuoli (Napoli; Italy) and Medical Genetics and Translational Medicine Department, University Federico II, Napoli (Italy); 'European Laboratory for Food Induced Diseases (ELFID)'- Prof. Maria Vittoria Barone - Dipartimento di Pediatria dell'Università 'Federico II'- Napoli (Italy).; Laboratorio di Sintesi Organica- Dr. Greta Varchi- Istituto per la Sintesi Organica e la Fotoreattività del Consiglio Nazionale delle Ricerche - Bologna (Italy); 'Laboratory of Translational Medicine' Dr. Anna Tesi- Istituto Scientifico Romagnolo per lo Studio e la Cura dei Tumori- Meldola – Forlì (Italy).

Naples, February 28, 2019

